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ABSTRACT

The nature of a healthy lifestyle and its significance to quality of life is examined. Following a discussion on what is involved in a healthy lifestyle, major health problems are described: (1) smoking; (2) alcohol and drug abuse; (3) sexually transmitted diseases; (4) diet and obesity; (5) stress; and (6) inadequate sleep. Recommendations are made for developing a healthy lifestyle that will help to reduce substantially the risk of chronic disease and premature death. Suggestions are made for developing a healthy lifestyle curriculum for schools. References are included as well as sources offering curriculum materials on health education. (JD)

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Education in Healthy Lifestyles: Curriculum Implications

John R. Seffrin, Mohammad R. Torabi

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Education in Healthy Lifestyles: Curriculum Implications

by
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Introduction

"We have left undone those things which we ought to have done; and we have done those things which we ought not to have done; and there is no health in us." So reads a passage from the Book of Common Prayer. This statement was accurate when it was first recorded and remains so today. The health of this nation's citizens is at risk due in large part to our unhealthy lifestyles.

This year about two million Americans will die, many of them prematurely and needlessly. While as a nation we are more health conscious than ever before, we tend to jump to the conclusion that the answer to our health problems is more and better medical care. This fastback is written to dispel this notion and to propose an alternative approach to health education, which, if understood and used as the basis for the health curriculum in our schools, could lead to the greatest improvement in our nation's health since the advent of modern medicine and the development of antibiotics.

First, consider the fact that many of our citizens become chronically ill early in life. For example, 85% of those over 65 years of age in the U.S. have one or more chronic diseases; however, virtually all these aged citizens have had their chronic condition since age 35! The early onset of these chronic diseases affects the quality of life for many in our population, and they ultimately die prematurely, perhaps as much as one to two decades prematurely.

The notion that more and more resources, both human and financial, expended on medical care will change the situation is erroneous. Rather, the best and quickest way to improve the health status of our

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nation is through changes in *personal health behavior*, changes that reflect a healthy lifestyle. But if these lifestyle changes are to occur, many of society's institutions must become involved; and our schools must provide the leadership in promoting healthy lifestyle education.

Diseases in America

When we look at diseases in America today, we see an array of health problems that are different from those at the turn of the century, when one leading cause of death was tuberculosis. In 1984 we are witnessing a virtual epidemic of genital herpes, with estimates ranging from a half to three-quarters of a million new cases annually. Also this year 121,000 Americans will die of bronchogenic carcinoma (basic lung cancer) caused largely by cigarettes, which is the leading cause of cancer deaths in adult males in the United States; and it is projected to be the leading cause of cancer death among women very soon.

In 1984 the average 14-year-old child had one-third of his teeth decayed, and 45 million American adults had destructive periodontal disease. Consider further, that this year the four leading causes of death between the ages of 35 and 54 are coronary disease, cancer, accidents, and cirrhosis of the liver. Most of these diseases and disorders are not usually *curable*, but most of them are highly *preventable* (cancer now is an exception with about 50% being cured) by adopting a healthy lifestyle and by avoiding unnecessary risks. In other words, we know far better how to prevent modern diseases than we know how to get rid of them once they develop.

In the past half century we have made tremendous strides in biomedical research. The development of antibiotics in the 1940s, the kidney machine in the 1960s, and heart by-pass surgery in the 1970s all tend to foster the notion that medical science can restore us to health. As a result, many persons have the attitude, "Here I am, doctor, with all my worn-out parts; fix me up."

Despite the giant steps forward in medical research, it has not been able to restore us to health. It merely helps us cope better with serious and often debilitating conditions. Even with triple and quadruple coronary artery by-pass surgery, an individual is not restored to the status of a person without heart disease. As the minutes, hours, and weeks passed for Barney Clark, we saw how limiting an artificial heart was compared to a healthy human heart. So while we can marvel at the advances in medical technology, we need to disabuse the public of the notion that this is *restorative* health care; it clearly is not. Only the human body, when it is kept fit, has its own restorative capacities.

According to a 1979 Surgeon General's report, *Healthy People*, 50% of deaths are caused by an inappropriate lifestyle, not from lack of medical care. Interestingly, only 10% of the deaths, according to the same report, could have been averted if unlimited medical services were available. Thus, even if we had a Mayo Clinic on every street corner, we could expect to reduce the number of deaths by only 10%. However, if there were radical changes in health behavior resulting from more effective health education programs, we could expect a massive reduction in premature deaths on the order of a million lives per year, since the diseases would be prevented before they developed.

The current health care system no longer meets the health needs of our society because our health problems are behavioral in origin. As a matter of fact, we suggest that we really don't have a *health care system* in the United States and never have had. What we have is an *illness care system*. For example, 65% of all health care employees work in hospitals, taking care of the ill. Although they are changing, hospitals have not traditionally been engaged in health promotion. Moreover, very few in the hospital setting are trained in health education.

Also, let's look at the dollars being spent for so-called health care in America. In 1960 our country spent 26.9 billion dollars for health care, which at that time represented 5% of our gross national product. By 1978 that figure had skyrocketed to 192.4 billion dollars. In 1984 we shall spend more than $400 billion dollars, which is more than 10% of our nation's GNP! But less than 2% of this enormous sum is being spent on preventive medicine; and less than 1% is being spent on basic health education. Studies now show that money spent on effective

health education programs can actually reduce medical care expenditures over time by decreasing the incidence and cost of chronic diseases (Eddy 1981). So until and unless we start spending more on health education, we can only expect health care costs to increase, especially as our population ages.

There is now ample clinical and epidemiological research to show which health lifestyle habits promote and preserve individual health. Now educational efforts must be made to bridge the gap between what experts know about health and wellness and what citizens should know and *do* about it. Because most health habits, good and bad, are developed early in life, our schools have a critical role to play in improving the future public health of our nation.

In the sections to follow, we examine the nature of a healthy lifestyle and its significance to quality of life. Then we identify briefly the basic health risk factors facing students today. Finally, we provide broad educational guidelines for reducing health risk factors and for promoting a healthy lifestyle.

What Is a Healthy Lifestyle?

A healthy lifestyle is more than just eliminating smoking and drinking from our habits. Rather, it is a way of life. It can decrease significantly the risk of disease, while increasing substantially the chances of living healthfully into the eighth decade of life. It is predicated on the idea that our chances for self-fulfillment are increased or decreased directly by our level of wellness. A healthy lifestyle includes almost every decision that we make — from when we get up in the morning to when we go to bed; it involves eating, drinking, driving, shopping, socializing, exercising, cleaning, working, and loving.

Virtually every decision that we make involves some degree of health risk or health benefit. Persons with a healthy lifestyle make intelligent decisions with regard to their total health and well-being without stripping life of all excitement and enjoyment. When an activity involves some inherent risk to health and safety, these persons minimize the risk by carrying out the activity with care. The person with a healthy lifestyle, then, makes every reasonable effort to weigh the risks compared to the benefits of various behaviors before making a decision to engage in them.

A person can do only so much to promote personal well-being since we obviously do not have complete control over our health. For instance, heredity plays a major role in the susceptibility to certain diseases such as diabetes and, to a lesser but significant degree, breast cancer. In the case of diabetes, susceptible individuals can do certain

things to reduce their risks, but they cannot eliminate the risk altogether. The best way to reduce inherited risks is to be aware of them and to avail oneself of sound, preventive health and medical care.

In addition to hereditary predispositions, some diseases arise for no known reason. Therefore, it is important for all persons to be sensitive to their bodies and to recognize symptoms and take action as early as possible. We know, for example, that about 140,000 lives could be saved each year from various cancers alone, if only people availed themselves of early detection techniques now available to them. So, whether one does something to avoid ever getting the disease in the first place (primary prevention) or one discovers a health problem early enough for medical intervention to be effective (secondary prevention), the important point is that persons must be knowledgeable enough to take responsibility for their own health.

In order to achieve this level of understanding, every effort needs to be made to inform and to educate our citizenry. This should happen in many settings — mass media, workplace, home, and especially in school. In school, opportunities to learn about healthy lifestyles should not be restricted to just the health classroom but should occur at appropriate times throughout the curriculum, thus supplementing and complementing the three components of a school health program: health instruction, health services, and a healthful school environment.

Children in the early grades are beginning to develop a health lifestyle, which, with slight modifications, they will likely follow for the rest of their lives. The earlier one is introduced to a healthy lifestyle, the better the chance for instilling lifelong health practices. Thus early childhood, with systematic reinforcement and follow-up at succeeding grade levels, provides the best opportunity for preventing the development of dangerous and health-threatening behaviors, which lead to serious diseases during the middle and later years of life. This is not to say that children's health lifestyles remain the same as they grow and develop. Nonetheless, they are influenced significantly by patterns of behavior that are acquired and reinforced early in life. So it is very important to begin at the earliest ages to promote good health habits and to encourage children to assume personal responsibility for their own health, especially their own hygiene and personal health habits.

Assessing One's Health Lifestyle

Although many aspects of one's health lifestyle are established in childhood, as one matures they can be modified or changed into a more positive, healthy lifestyle or a more destructive, unhealthy one. What will determine one's health lifestyle are the risks that one decides to take. G. E. Alan Dever (1980) has identified what he calls "self-created risks" in three components of a person's lifestyle:

1. Leisure activity risks include health-related decisions about one's recreational activities. For example, lack of exercise increases the risk of heart diseases, promotes obesity, and contributes to physical unfitness.

2. Consumption pattern risks include health-related decisions about diet, nutrition, and the use of harmful substances. Numerous examples can be cited: overeating causes obesity; excessive cholesterol intake increases the risk of heart disease; heavy use of alcohol can lead to cirrhosis of the liver and traffic accidents; smoking can cause cancer, emphysema, and heart disease; and drug abuse may cause a variety of health and safety problems. Clearly, one's consumption patterns significantly contribute to one's overall health status.

3. Employment or occupational risks include health-related factors in the workplace. For example, pressures at work can lead to stress, which in turn causes anxiety and stress-related health problems such as headaches, depression, or peptic ulcers.

A simple analysis of the above risk categories can help individuals assess their health lifestyle and can lead persons to focus on areas needing improvement or adjustment in their health status.

Healthy Lifestyles and Public Health

Two public health revolutions have occurred in the United States. The first revolution was the struggle against infectious diseases, which lasted for most of the first half of the 20th century. At the turn of the century, the main killers were influenza, pneumonia, diphtheria, tuberculosis, and gastrointestinal infections. But gradually the causes of death have shifted from acute infectious diseases to chronic diseases like heart disease, cancer, strokes, and diabetes. By 1977 almost three-

fourths of all deaths each year were the result of these chronic diseases. So during this first public health revolution, the death rates from infectious diseases declined drastically since the turn of the century, while chronic diseases have increased dramatically.

We are now immersed in the second revolution in public health, in which various chronic diseases can be brought under control. Infectious and communicable diseases were brought under control largely through immunization programs, better sanitation, and the development of modern antibiotics. Whereas infectious disease control focused on microbes, chronic disease control must focus on people and their behavior — their health lifestyles.

If the second public health revolution is to succeed, public health policy and intervention strategies will need to focus on the task of changing individuals' behavior. To control infectious diseases was a direct cause-and-effect process: destroy or immunize against the microorganism that caused a certain disease. With chronic diseases, the process is not as simple, nor as direct. There are multiple causes and multiple effects of chronic diseases, which are extremely complex and interdependent. An example of this complexity is the effect of smoking, drinking, poor diet, and lack of exercise contributing not to just one disease but to many diseases.

Another important difference between the first and the second health revolutions is that whereas the control of infectious diseases emphasized public health policies at the community level such as the requirement of immunizations for school attendance, the control of chronic diseases must emphasize health decisions made by the individual. Thus, all persons must assume more responsibility for their own health and for the community's health as well. Former Secretary of the Department of Health, Education and Welfare Joseph A. Califano put it well when he stated:

> I can compress what we have learned about the causes of these modern killers in three summarizing sentences: We are killing ourselves by our own careless habits. We are killing ourselves by carelessly polluting the environment. We are killing ourselves by permitting harmful social conditions to persist — conditions like poverty, hunger, and ignorance — which destroy health, especially for infants and children. You, the in-

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dividual, can do more for you own health and well-being than any doctor, any hospital, any drug, or any exotic medical device.

And, he might have added, you must decide for yourself. It is your choice, and you will have to live or die with that choice; the government cannot and should not make the decision for you. Since today's chronic diseases are closely associated with human behavior and lifestyle, we need to be sure each person is educated so that responsible as well as free choices can be made that promote the public's health.

Major Health Problems in Children and Youth

In this chapter we shall consider the basic health problems of American children, adolescents, and young adults, ages 1 to 24, and identify those aspects of a healthy lifestyle that can help to reduce or eliminate those problems.

Health Problems of Children Ages 1 to 14. The death rate of this age group was 43 per 100,000 in 1977. On the average, black Americans in this age group have a 30% higher mortality rate than white Americans. Although the mortality rate of this age group has drastically decreased since 1925, it is still higher than in many other developed countries, such as Sweden and England. The main killer of this age group is accidents, which account for 45% of the total childhood mortality. Although rare, cancer is the leading fatal disease in this age group, affecting about 22 children per 100,000.

In addition, today's children face numerous other problems that threaten their health and total well-being. Some of these problems are related to school and the learning process, such as learning disabilities, behavioral disturbances, and speech and vision problems.

Health Problems of Adolescents and Young Adults. The mortality rate of Americans, ages 15 to 24, is 117 per 100,000, which is *higher* than the death rate of the same group 20 years ago. The death rate of males in this age group is almost three times greater than that of females. Additionally, the mortality rate of this age group is higher than that of their counterparts in many other countries including Sweden, England and Wales, and Japan. The major causes of death in this age group are ac-

cidents, suicide, and homicide. Chronic diseases, such as cancer and heart disease, are uncommon in this age group, but they do occur. But the most formidable health problems facing youth today are those associated with violence and injury, alcohol and drug abuse, unwanted pregnancies, and sexually transmitted diseases. Collectively these problems are the primary causes of school dropouts as well as very real threats to the health of teenagers.

A simple analysis of the above health problems for younger Americans, ages 1 to 24, shows that the major causes of death are not diseases per se, but rather accidents and violence. However, the major risk factors that foster the development of chronic diseases later in life are highly evident in this age group's lifestyle and behavior patterns. So even those who survive the accident-prone and violent environment of young Americans today have chronic disease awaiting them just around the corner.

The lifestyle risk factors associated with today's main killers are: smoking, alcohol and drug abuse, poor and unbalanced diets, stress, sexually transmitted diseases, and hazards and accidents. For example, smoking is a major risk factor associated with heart disease, cancer, and emphysema. Diet is a risk factor associated with such major diseases as heart disease and cancer. These two major killers alone account for about 60 % of all deaths each year. These and the other risk factors are discussed below. Table 1 on page 19 shows the major causes of death in 1977.

Smoking

Smoking is the single most important known risk factor to human health in the United States. Today about 47 million Americans smoke 590 billion cigarettes per year. The good news is that 35 million former smokers have successfully quit. In 1984 less than one out of every three adults (29%) smoked, the lowest rate in over three decades. The smoking rate among adult males declined from 53% in 1965 to 31% in 1984. On the other hand, the smoking rate among youngsters, ages 12 to 17, increased during the 1960s and 1970s but has now leveled off. In fact, fewer younger men are starting the habit; and of those who choose to

Table 1. Major Causes of Death in 1977 and Associated Risk Factors

Cause	Percent of all deaths	Significant Risk Factors
Heart Disease	37.8	Smoking, hypertension, elevated serum cholesterol (diet), lack of exercise, diabetes, stress, family history
Malignant neoplasms	20.4	Smoking, worksite carcinogens, environmental carcinogens, alcohol, diet
Stroke	9.6	Hypertension, smoking, elevated serum cholesterol, stress
Accidents other than motor vehicle	2.8	Alcohol, drug abuse, smoking (fires), product design, handgun availability
Influenza and pneumonia	2.7	Smoking, vaccination status
Motor vehicle accidents	2.6	Alcohol, no seat belts, speed, roadway design, vehicle engineering
Diabetes	1.7	Obesity
Cirrhosis of the liver	1.6	Alcohol abuse
Arteriosclerosis	1.5	Elevated serum cholesterol
Suicide	1.5	Stress, alcohol and drug abuse, and gun availability

Source: *Health United States*, 1980, page 274

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smoke, most are smoking lower tar cigarettes. Even with these hopeful trends, however, about 50% of our teenagers (age 12 to 17) have had some experience with smoking (tried it at least once), while for young adults (age 18 to 25) this rate soars to about 77%.

Smoking now has the distinction of being the number one national public health enemy. Cigarette smoking is the major risk factor in both heart disease and lung cancer. As the Surgeon General's Report (1979) stated, "Cigarette smoking is the single most important preventable cause of death."

A surprising number of people do not know just how harmful smoking is. For example, a recent study by the Federal Trade Commission stated that only a minority of smokers know about the added risk of heart disease among smokers. Moreover, almost 3 out of 4 smokers believe that they have a good chance of surviving lung cancer if they contract it. In reality, less than 10% who develop lung cancer survive even five years. Smoking is causally related to heart disease; lung cancer; and cancer of the mouth, tongue, throat (larynx and pharynx), esophagus, pancreas, kidney, and bladder. It causes chronic lung disease, which is one of the fastest growing chronic diseases in America today.

It is a known fact that the death rate from heart attack among people who do not smoke cigarettes is significantly lower than among smokers. For those individuals who have quit smoking cigarettes, the death rate from cancer gradually decreases until their risk is roughly comparable to that of people who have never smoked. An individual who smokes a pack a day has two times the risk of having a heart attack as an individual who has never smoked. If the smoker smokes more than a pack a day, the risk is even greater. Moreover, if a smoker has a heart attack, he is more apt to die from that heart attack than a non-smoker who has a heart attack.

Much research has been done on the effect of nicotine and carbon monoxide on the circulation of the blood. For example, when one smokes a cigarette, the nicotine makes the heart beat faster; therefore, the heart is forced to work harder and needs more oxygen just to function at rest. In addition, the carbon monoxide from the tobacco smoke reduces the amount of oxygen carried in the blood. So the heart, which

is by nature "oxygen hungry," is deprived of its needed fuel source.

Smoking also is a major risk factor in blood vessel disease of the extremities (Buerger's disease). The blood vessels which carry blood to the legs and arms are narrowed by this disease. If a blood clot blocks these narrowed vessels, it could result in serious damage or even loss of an arm or leg. Virtually all people who have Buerger's disease are smokers. Quitting smoking can reduce the severity of this disease.

Cigarette smoke is considered the most prevalent carcinogen in our environment. Pipe and cigar smoking also increase the chance of getting cancer, although it is lower than in the case of cigarette smoking. It is now estimated that at least 30% of all human cancer is caused by smoking. The more one smokes, the greater the risk becomes.

Heart disease and cancer are not the only diseases that are caused by smoking cigarettes. Emphysema and chronic bronchitis are the fastest growing chronic diseases in the country. Emphysema is almost always caused by cigarette smoking. Deaths from emphysema and chronic bronchitis increased 500% between 1945 and 1975.

School children, as well as adults, need to understand just what the consequences of tobacco use are. In life-and-death terms, the estimate is that 350,000 Americans died from tobacco-induced disease in 1983 alone. Because of these stark statistics, at least 35 million Americans have quit smoking since 1964. Of this number, 90% quit on their own (without special assistance such as a quit-smoking clinic); so it can be done.

It is important for smokers to know that they should stop smoking as soon as possible since once a heart attack occurs, the heart will be permanently damaged. If smokers quit before a heart attack occurs, regardless of how long or how much they have been smoking, the risk of heart attack will be lessened.

Alcohol and Drug Abuse

A drug is any substance that, by its chemical nature, alters the function of mind or body. Alcohol is a drug and is the active ingredient in distilled spirits, beers, and wines that provides all of the intoxicating effect of these beverages. Although alcohol contains calories, it has no

nutritive value.

Before discussing the risk factor of alcohol and other drugs in relation to our health, let us look first at the incidence of drug and alcohol use among youth and young adults. According to the National Institute on Drug Abuse (1983), more than 65% of students, ages 12 to 17, have used alcohol, more than 26% have tried marijuana, about 5% have taken hallucinogens, and more than 6% have used cocaine. About 7% have tried stimulants, and about 6% have tried sedatives. The incidence of drug use is considerably higher among young adults, ages 18 to 25 years: more than 94% have tried alcohol, more than 68% marijuana, more than 28% cocaine, more than 21% hallucinogens, 18% stimulants, more than 18% sedatives, about 15% tranquilizers, about 12% analgesics, and more than 1% heroin. Clearly, drugs, including alcohol, are available; and some are used quite commonly by young Americans.

Drinking patterns among high school students were relatively stable for males and females between 1975 and 1980. However, a 1980 survey revealed that heavy drinking, defined as five or more drinks in a row on one or more occasions during the two weeks prior to interview, occurred among 52% of senior males and 31% of senior females. Today, there are about 3.3 million teenagers in this country who have a problem with alcohol abuse.

Alcohol drinking is not just a problem for teenagers and young adults. Approximately one-third of adult Americans drink alcoholic beverages at least once a week, and another third drink primarily on special occasions. Of the remaining third, half have always abstained and the other half currently do. One out of 10 adults who drink alcohol experiences problems with its use. It is estimated that there are currently about 10 million alcoholics in the United States.

The National Institute on Alcohol Abuse and Alcoholism reported that alcohol abuse incurred costs amounting to nearly $43 billion in 1975 through the loss of productivity and related problems. People with drinking problems function less well, so society loses a portion of their normal productivity. Also the costs of health and social services are escalated in order to cope with consequences of alcohol abuse. It is difficult to determine exactly how much crime results directly from prob-

lem drinking, but there is no argument that a relationship exists between alcohol use and crime, including homicides. Furthermore, alcohol abuse is highly related to such hazards as fires and vehicular accidents. Recent statistics indicate that 42% of all fatal alcohol-related accidents involve young adults, ages 16 to 24, although this age group makes up only 20% of licensed drivers. Drunk driving is directly responsible for more deaths among this age group than any other cause of death.

Alcohol abuse is also known to be associated with several serious health problems of the 1980s, namely, cancer, cirrhosis of the liver, accidents, and suicide. In addition, there is evidence implicating alcohol with problems of the gastrointestinal tract, nervous system, heart, noncardia muscle, and endocrine system.

Three percent of cancer deaths are associated with excessive use of alcohol. Clinical observations indicate that alcohol abuse is involved in causing cancer, although the mechanisms are still unknown. Additionally, studies show that heavy consumers of alcohol are much more likely to die of cancer of the mouth, pharynx, larynx, esophagus, liver, and lung if they also smoke. Among both males and females, from one-third to one-half of oral cavity, laryngeal, and esophageal cancer are associated with heavy consumption of alcohol and cigarette smoking. About 30% of liver cancer is associated with heavy use of alcohol.

Cirrhosis of the liver is the other major chronic disease associated with the heavy use of alcohol. This is a chronic inflammatory disease of the liver in which functioning liver cells are replaced by scar tissue. This disease is responsible for 1.6% of all deaths in the United States. Cirrhosis was once thought to be caused by poor nutrition among alcoholics. However, recent studies show that diet may not be an important factor in causing cirrhosis, since not all chronic heavy drinkers with poor diets develop this disease. Probably, other factors such as genetics play a role in the development of cirrhosis.

It is clear that an individual's lifestyle with regard to alcohol consumption can have a significant impact on life expectancy and quality of life. While drinking in moderation appears not to be a health hazard, excessive use of alcohol is a serious threat to one's health and safety. Health education programs need to emphasize responsible drinking.

Before making choices about drinking, young people need opportunities to explore their own values and society's expectations about drinking, including a clear understanding of the laws regarding alcohol use.

Sexually Transmitted Diseases

Sexual lifestyles may increase the risk of several serious diseases, such as gonorrhea, syphilis, and especially genital herpes, which is fast approaching epidemic proportions. According to estimates, there are at least 7 million new or recurrent episodes of genital herpes annually in the United States.

Genital herpes, although not fatal, is a chronic disease. Because at present a cure for herpes is not available, the disease produces anxiety among its victims because of the fear of infecting sexual partners. Additionally, herpes is known to be related to cervical cancer.

Defining or prescribing responsible sexual behavior is not an easy task in a pluralistic society with an ambiguous sex ethic. Nevertheless, the health risk factors in a sexual lifestyle that involves frequent and multiple partners and indiscriminate sexual encounters are serious concerns for both individual and public health. Sexually active youth, indeed all youth, need complete and accurate information about all sexually transmitted diseases, including symptoms, treatment, and prevention. In addition, they need opportunities to discuss and clarify their own values about their current and future sexual lifestyles.

Diet and Obesity

Our eating habits usually are established by early experiences with food in the family. Other factors such as cultural and religious practices, advertising, and socioeconomic status also influence our food selection patterns. We live in a society where access to sufficient calories is virtually ensured. The real challenge before us is to educate the public regarding the why and the how of sound eating practices.

Our daily diet can contribute to health or it can actually cause or help to cause some diseases. The major diseases related to our diet are heart disease, stroke, high blood pressure, diabetes, breast cancer, and cancer of the colon and rectum.

Between 1963 and 1973, mean body weights in the adult population of the U.S. increased by an average of six pounds for men and three pounds for women. About 14% of males and 24% of females are 20% or more over their ideal weight. In the vast majority of cases, obesity results from eating too much and exercising too little. Obesity places a heavy burden on the heart and is associated with coronary artery disease, as well as high blood pressure (hypertension).

It is now thought that about 35% of all human cancer is related to dietary practices. Although studies are inconsistent, it is known that in countries like the United States with a high consumption of meat, butter, and other foods high in fat, there is also a greater incidence of high blood cholesterol and of breast and colon cancer. However, foods rich in beta-carotene, such as cabbage, broccoli, cauliflower, and brussel sprouts, appear to reduce the risk of cancer.

Epidemiologists have discovered other important associations between diet and cancer. Obesity of 40% or more overweight was found to be associated with a five-fold increase in mortality from endometrial cancer, about a four-fold increase in gallbladder cancer, and with a smaller but significant increase in cervical, ovary, and breast cancers. Animal studies indicate that nitrites and certain food additives may increase our cancer risk as well.

The sixth leading cause of death in the United States is diabetes mellitus, which is the inability of the body to produce insulin in order to regulate the supply of glucose to body cells. Currently, the number of diabetics in the United States is estimated to be about 10 million. While the exact cause of diabetes is unknown, heredity is a factor. However, many who are predisposed to developing diabetes could postpone or even prevent the disease by merely controlling their body weight. A large number of potential diabetics develop the disease only after becoming obese.

Still another health problem associated with our diet is hypertension or high blood pressure. Obesity has previously been mentioned as a factor in high blood pressure. Also, over-consumption of salt has been associated with high blood pressure in some people. Since most Americans consume far more salt than they need, it would be prudent to reduce salt in our diets, especially for those with a tendency for high

blood pressure.

America's eating habits can be blamed for many health problems. The main culprits have been over-consumption of fat and sugar and the under-consumption of fiber. Diets high in saturated fat increase blood cholesterol levels in most people. As blood cholesterol levels increase, so does the risk of heart disease. Additionally, over-consumption of fat, both saturated and unsaturated, increases the risk of breast cancer in women and colon and rectal cancer in both men and women.

It appears that most Americans have too little fiber in their diets. Although the role of fiber in the diet is not fully understood, it helps to reduce constipation and to promote regularity by sequestering water in the colon. Also, a high fiber diet is believed by some scientists to bind carcinogens (cancer-causing chemicals) in the colon, thus reducing the risk of intestinal cancer over a lifetime. It now appears advisable to increase our fiber intake by eating fresh fruits, vegetables, and bran, which are high in fiber.

There is little question that one's diet lifestyle as reflected in choice and amount of foods has a significant influence on one's health, both now and in the future. Having a well-balanced diet rich in vegetables and fruit and low in fat reduces the risk of obesity, cancer, heart disease, and high blood pressure, as well as making the individual more resistant to other diseases. A healthy lifestyle with regard to the selection of the right type of diet can not only increase our life expectancy but can also improve the quality of life.

Stress

Stress can be good or bad. Some stress is necessary if we are to perform at our best. (See fastback 130 *Dealing with Stress: A Challenge for Educators.*) On the other hand, too much stress is dangerous to the total health of an individual. This type of stress may contribute to the development of heart disease, high blood pressure, ulcers, skin blemishes, asthma, migraine headaches, chronic fatigue, inability to function, depression, and accident proneness.

One source of stress for young people is school itself. The pressure to make good grades can often place a tremendous burden on the serious

student, especially the student with unrealistic academic expectations. Another source of stress for young people is the peer pressure to use alcohol and drugs. Ironically, drugs are sometimes used as a means of coping with stress, which in turn creates further stressful consequences.

Modern life seems to be filled with stress, from the threat of nuclear war to making ends meet. At the same time, many of the traditional support systems for coping with stress are not present in today's depersonalized society. With high levels of unemployment, growing numbers of one-parent families, and mobility of our population, the incidence of stress seems to grow almost daily.

Learning about stress and how to deal with it is more important today than ever before. There are positive ways to deal with stress; and there are inappropriate ways of coping, such as overeating, which may produce other health problems and compound the stress in one's life. Through education and counseling, students can be helped to analyze the stress factors in their lives and to develop ways of coping with these factors.

Sleep

Adequate sleep is very much a part of a healthy lifestyle. Lack of sleep can be hazardous to your health. Most people need seven to eight hours of sleep each day to maintain good health. Not only does an inadequate amount of sleep affect health and well-being negatively, but improper means of treating the problem of sleeplessness can produce other health problems and further complications.

Many people consume large numbers of sleeping pills in order to get a "good night's rest." In fact, sleeping pills constitute the second most widely used prescription drug in the United States. Annually, about one billion sleeping pills are taken. While their side effects on our health are not well documented, sleeping pills distort sleep as much as they induce it. Moreover, we know that sleeping pills can interact harmfully, even fatally, with other drugs, such as alcohol. So a safety hazard exists for the sleeping pill user who also uses other drugs. Sleeping pills are the third most common means of suicide; they are implicated in about 30% of all drug-related deaths. Also, sleeping pills can affect the fetus in pregnant women and may even cause severe limb deformities.

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Recommendations for a Healthy Lifestyle

The second revolution in public health will succeed when we conquer the chronic diseases that are the main killers today. These chronic diseases are related very closely to an individual's lifestyle. Therefore, a curriculum that emphasizes individual decision making is the most important part of education for healthy lifestyles. As Joseph Califano stated, "You, the individual, can do more for your own health and well-being than any doctor, any hospital, any drug, or any exotic medical device."

Toward this end, we offer the following healthy lifestyle recommendations, which, if followed, will help to reduce substantially the risk of chronic disease and premature death. Moreover, if these recommendations are integrated into a healthy lifestyle, individuals can enjoy peace of mind knowing that they have taken active steps to avoid self-inflicted disease.

Smoking

If you smoke, quit. If you don't smoke, don't ever start. There is no such thing as safe smoking. If you can't or won't quit on your own, seek assistance from professionals. The American Lung Association, the American Cancer Society, and other groups have established effective quit-smoking clinics in most communities throughout the nation.

Until smokers quit, they are better off to smoke a low tar/low nicotine product, and to smoke it only half way down. While these practices may reduce the risk a little, all smoking has significant deleterious

effects on our health. The single most important health recommendation in all of preventive medicine is simply: Don't Smoke!

Alcohol and Drug Use

There are no safe drugs, and alcohol is a drug. Excessive use of alcohol and other drugs is destructive to health and family, as well as having other undesirable social consequences. Advocating total abstinence from alcohol is probably unrealistic in a culture where drinking is so widely accepted as a social custom. A more realistic goal is to help students know what it means to drink responsibly. Responsible individuals should learn what their limits are with regard to drinking. To put it simply, responsible drinking is knowing when to drink, how to drink, what to drink, when to stop, and when to say "no" or "no more." Certainly, one should avoid driving after drinking, since even a small amount of alcohol impairs both reaction time and judgment. Today, 50% of all fatally injured drivers have a blood alcohol level (BAC) at or above the legal limit of .10.

Drugs, whether prescribed or purchased over the counter, can be injurious as well as beneficial. Their side effects and long-term effects are not always obvious or even known. The best recommendation is don't use them, unless absolutely necessary.

Diet and Nutrition

The positive effects of a well-balanced diet and the negative effects of a poor and inadequate diet are well documented. A proper diet begins with a good breakfast. Eating breakfast is important because eight to twelve hours have usually elapsed since the last meal. Because of this long time lapse, an individual's blood sugar level can become low and may get even lower by mid-morning, causing hunger pangs and fatigue. Studies have discovered that people who do not eat breakfast are less efficient in the late morning hours. A good breakfast should provide about one-fourth of an individual's daily need for essential nutrients and calories.

The daily diet needs to include a wide variety of foods, including fresh fruits and vegetables, which provide most of the vitamins and

minerals needed for a healthy life. Avoid "junk food" as well as excessive amounts of salt and sugar. For most people, no more than 30% of their daily calories should come from fatty foods. To comply with this recommendation, most Americans would need to reduce their daily fat consumption by about one-fourth.

Exercise

Regular exercise can have a positive effect on physical fitness and mental and emotional stability. Regular exercise is known to reduce the risk of cardiovascular disease and to prevent obesity; and it is a good method for relieving tension. There are appropriate forms of exercise for the young, old, handicapped, male, and female. Below are some guidelines to follow when undertaking an exercise program:

1. Have a complete physical examination before beginning your exercise program.
2. Have an electrocardiogram, especially if you are over 40 years old.
3. Avoid overexertion, and don't try to outdo others in competition.
4. Make sure to have at least a 10-minute warm-up and a warm-down period after the workout.
5. If possible, exercise before lunch hour, because the exercise should suppress appetite somewhat, thus helping you to avoid overeating at lunch.
6. If possible, avoid long gaps in your exercise program.
7. Keep a profile of your physical performance from month to month and year to year to assess your progress.

Regular Physical Checkups

The early detection of chronic diseases is extremely important. For example, in America each year about 140,000 lives could be saved from cancer alone if the disease were detected earlier using diagnostic techniques currently available. Become aware of your body changes and conditions. Nobody can know better how you feel than you. When

bodily change occurs and persists, consult your doctor. In addition, establish a regular routine of physical and dental checkups. The following recommendations are offered to individuals who seek a healthy lifestyle:

1. Have a complete physical checkup annually by your family doctor, especially after age 40.
2. Have a dental checkup at least annually, more often if you have special dental or periodontal problems.
3. Women should perform breast self-examination once a month.
4. Men should perform testicle self-examination once a month.
5. Women, age 20 and over, should have a pap test; after two initial negative tests one year apart, women should have a test *at least* every three years.
6. Women, age 20 to 40, should have a pelvic examination at least every three years, after age 40 they should have a pelvic exam every year.

Accident Prevention

Thousands of deaths and serious injuries can be prevented by using a safety belt while driving or riding in a motor vehicle. Get in the "buckle up" habit. Avoid driving while under the influence of alcohol or other drugs. We all need to internalize the safety message, "If you drive, don't drink; if you drink, don't drive."

Adequate Sleep

Although individuals differ in the amount of sleep they need to be healthy and refreshed the next day, generally this will be between seven and eight hours each night. In addition to regular exercise and a balanced diet, the following suggestions about sleeping habits will contribute to a healthy lifestyle:

1. Obtain a comfortable bed; remember, you will spend approximately one-third of your life in it.
2. Avoid a big meal just before bedtime; the digestive process is likely to keep one awake, at least for a while.

3. Avoid naps during the daytime if you are having trouble sleeping at night.
4. Drinking a glass of warm milk or taking a hot shower right before bed may help one to fall asleep.
5. Avoid sleeping pills; they distort sleep as much as they induce it.
6. If sleeping problems persist, seek professional help.

Developing a Healthy Lifestyle Curriculum

To this point, we have defined lifestyle and have shown the relationship between lifestyle and health; and we have offered recommendations for developing a healthy lifestyle. Children must begin learning about healthy lifestyles at an early age, and the process must continue throughout their school experience. This calls for a strong school health education program, with heavy emphasis on disease prevention and health promotion. While healthy lifestyle education is the major responsibility of health education specialists, all teachers, particularly at the elementary level, have both an opportunity and an obligation to contribute to the process.

The curriculum for healthy lifestyle education should focus on helping students to make intelligent, responsible decisions concerning their lifestyle and personal health behavior. Accurate health information must be readily available. Emphasis should be given to developing attitudes of personal responsibility for the maintenance of health. This will require critical thinking and the application of decision-making skills as they relate to health attitudes and behavior of self and others.

Although approaches may vary, a healthy lifestyle curriculum must provide a comprehensive and sequential progression of activities for students K through 12. The health risk factors discussed in this fastback provide excellent starting points on which to build a curriculum. For example, at the elementary level attention can be directed toward the development of basic hygiene practices such as toothbrushing and handwashing. Safety and accident prevention can be taught by emphasizing traffic safety and caution in dealing with strangers. The need for ade-

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quate rest, sleep, relaxation, and exercise can be taught within the context of play. Drug education can begin with consideration of the safe uses of medicine. Principles of nutrition, growth, and development can be introduced through animal experiments.

At the middle and secondary levels health information is used more extensively, and the emphasis shifts increasingly toward personal responsibility and decision making. Exploration of attitudes and values become more important, particularly in relation to peer influence. In addition to the health curriculum, there are many opportunities to incorporate healthy lifestyle education into other curriculum areas.

Preparing a healthy lifestyle curriculum is a major undertaking, but assistance is available from several sources. A number of public and private agencies have prepared curriculum materials using the healthy lifestyle concept. Many of these materials are available to school personnel at little or no cost. See the Appendix for a listing of some of these sources.

Epilogue

It is said that we are a "nation at risk" educationally. The same charge could be made about our nation's health. But there is every reason to be optimistic, because just as efforts are under way to improve instruction in our public schools, so are innovative efforts in both school and public health education beginning to yield results.

Although we have a long way to go, several encouraging signs point toward the acceptance of healthy lifestyles. For example, during the past decade there has been about a 25% decline in heart attack deaths in the United States; there has also been a 40% reduction in stroke deaths during the same period. These mortality reductions have come about for several reasons: some medical, such as better medicine to control hypertension; and some behavioral, such as a significant reduction in butter consumption (down 32%), animal fats and oils consumption (down 57%), and tobacco consumption (down 22%) since 1963. While no single factor is responsible for these favorable trends, the public, in part due to various educational efforts, is beginning to appreciate the relationship between lifestyle and health status and longevity. Parents, teachers, community leaders, and students are alerted to health issues. The teachable moment is at hand. It is now up to our education system to seize this opportunity and to respond by providing information about, and guidelines for, a healthy lifestyle.

After the data about healthy lifestyles are reviewed, it becomes abundantly clear that *prevention is the cure*. Science has shown how to promote and maintain health, and we now have a population with a clear will to be healthy. What remains is for our institutions to supply the

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needed and available information in an educationally sound way. The public has the will; we now need to provide the way.

We close on a poetic note, which conveys the basic message of this fastback.

A Fence or an Ambulance
by Joseph Malins

'Twas a dangerous cliff, as they freely confessed,
Though to walk near its crest was so pleasant;
But over its terrible edge there had slipped
A duke and full many a peasant.
So the people said something would have to be done,
But their projects did not at all tally;
Some said, "Put a fence around the edge of the cliff,"
Some, "An ambulance down in the valley."

But the cry for the ambulance carried the day,
For it spread through the neighboring city;
A fence may be useful or not, it is true,
But each heart became brimful of pity
For those who slipped over that dangerous cliff;
And the dwellers in highway and alley
Gave pounds or gave pence, not to put up a fence,
But an ambulance down in the valley.

"For the cliff is all right, if you're careful," they said,
"And, if folks even slip and are dropping,
It isn't the slipping that hurts them so much,
As the shock down below when they're stopping."
So day after day, as these mishaps occurred,
Quick forth would these rescuers sally
To pick up the victims who fell off the cliff,
With their ambulance down in the valley.

Then an old sage remarked: "It's a marvel to me
That people give far more attention
To repairing results than to stopping the cause,
When they'd much better aim at prevention.
Let us stop at its source all this mischief," cried he,
"Come, neighbors and friends, let us rally;
If the cliff we will fence we might almost dispense
With the ambulance down in the valley."

"Oh, he's a fanatic," the others rejoined,
"Dispense with the ambulance? Never!
He'd dispense with all charities, too, if he could;
No! No! We'll support them forever.
Aren't we picking up folks just as fast as they fall?
And shall this man dictate to us? Shall he?
Why should people of sense stop to put up a fence,
While the ambulance works in the valley?"

But a sensible few, who are practical too,
Will not bear with such nonsense much longer;
They believe that prevention is better than cure,
And their party will soon be the stronger.
Encourage them then, with your purse, voice, and pen,
And while other philanthropists dally,
They will scorn all pretense and put up a stout fence
On the cliff that hangs over the valley.

Better guide well the young than reclaim them when old,
For the voice of true wisdom is calling,
"To rescue the fallen is good, but 'tis best
To prevent other people from falling."
Better close up the source of temptation and crime
Than deliver from dungeon or galley;
Better put a strong fence round the top of the cliff
Than an ambulance down in the valley.

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References

Alle, John E. "Hypnosis: You're Not Getting Sleepy." *Medical Self-Care* (Spring 1982): 30-33.

American Cancer Society. *How to Examine Your Breasts*. Pamphlet.

American Cancer Society. *Danger Cigarettes*. Pamphlet.

American Cancer Society. *Cancer Related Checkups*. Pamphlet.

American Cancer Society. "Cancer Causes and Prevention: Clues from Epidemiology." *Slide Set for Professional Education*. A.C.S. Code #3809, 1983.

American Heart Association. *High Blood Pressure in Teenagers*. Pamphlet.

American Heart Association. *Heart Facts 1984*. Dallas, Texas.

American Heart Association. *Weight Control Guidance in Smoking Cessation*. Pamphlet.

American Heart Association. *Shopper's Guide for a Healthy Heart*. Pamphlet. American Heart Association Indiana Affiliate, 1982.

American Heart Association. *Smoking and Heart Disease*. Pamphlet.

American Heart Association. *Heart Attack*. Pamphlet.

American Heart Association. *American Heart Association Ad Hoc Committee on Cigarette Smoking and Cardiovascular Diseases*. Dallas, Texas, 1977.

American Heart Association. *Fact Sheet on Heart Attack, Stroke, and Risk Factors*. Dallas, Texas, 1983.

American Heart Association. *High Blood Pressure*. Pamphlet.

Arnold, Charles B. *Advances in Disease Prevention*. Vol. 1. New York: Springer Publishing Co., 1981.

Beattie, Edward J. *Toward the Conquest of Cancer*. New York: Crown, 1980.

Briggs, George M.; Calloway, Doris; Howes. *Nutrition and Physical Fitness*. Philadelphia: Saunders College Publishing, 1979.

Burroughs Wellcome Co. *Herpes Alert*. Pamphlet. New York: distributed by Information Center on Herpes Disease.

Castleman, Michael. "How to Get a Good Night's Sleep." *Medical Self-Care* (Winter 1981): 22-26.

Davis, Alan C., and Milone, Louise. "The Fight Against Cancer: The 1982 Legislative Front." *Cancer Investigation* 1, no. 1 (1983): 101-107.

Dever, Alan G.E. *Community Health Analysis: A Holistic Approach*. Germantown, Md.: Aspen Systems, 1980.

Eddy, David M. "The Economics of Cancer Prevention and Detection: Getting More for Less." *Cancer* 46 (1981): 1200-1209.

Engs, Ruth C. "Using Hypnosis to Reduce Stress Related Problems of Single Parenthood." Paper presented at the U.N.I.O.P.S.S. International Conference in Paris, France, March 1982.

Engs, Ruth C. *Responsible Drug and Alcohol Use*. New York: Macmillan, 1979.

Faker, Marilyn M., and Reinhardt, Adina M. *Promoting Health Through Risk Reduction*. New York: Macmillan, Collier, 1982.

Ferguson, Tom. "Getting Organized to Deal with Stress." *Medical Self-Care* (Spring 1982): 22-26.

Ismail, A.H. "Effect of Organized Physical Fitness Program on Physical and Emotional Health." Mimeographed. West Lafayette, Ind.: Purdue University, 1978.

Kellog Company Consumer Service Department. *Breakfast, Anyone*. Battle Creek, Mich., n.d.

Kinney, Jean, and Leaton, Gwen. *Loosening the Grip: A Handbook of Alcohol Information*. St. Louis, Mo.: C.V. Mosby Co., 1978.

Knowles, John H. *Doing Better and Feeling Worse: Health in the United States*. New York: W.W. Norton and Co., 1977.

Madden, Thomas A.; Turner, Irene R.; and Eckenfels, Edward J. *The Health Almanac*. New York: Raven Press, 1982.

Metropolitan Life Insurance Company. *Statistical Bulletin* 65, no. 3 (July/September 1984): 1-24.

National Institute of Allergies and Infectious Diseases Study Group. *Sexually Transmitted Diseases: Summary and Recommendation*. Washington, D.C.: U.S. Department of Health, Education and Welfare, National Institute of Health, 1980.

National Institute on Alcohol Abuse and Alcoholism. *The Whole College Catalog About Drinking*. Rockville, Md., 1980.

National Institute on Alcohol Abuse and Alcoholism. *Third Special Report to the U.S. Congress on Alcohol and Health*. Rockville, Md., June 1978.

National Institute on Drug Abuse. *Public Health Issues and Drug Abuse Research*. Research Issues No. 30. Rockville, Md.: U.S. Department of

Health and Human Services, 1982.

National Institute on Drug Abuse. *National Survey on Drug Abuse: Main Findings*. Rockville, Md.: U.S. Department of Health and Human Services, 1979.

Oppenheimer, Steven B. *Cancer: A Biological and Clinical Introduction*. Boston: Allyn and Bacon, 1982.

Parkinson, Rebecca S. et al. *Managing Health Promotion in the Workplace: Guidelines for Implementation and Evaluation*. Palo Alto, Calif.: Mayfield Publishing Co., 1982.

Pollock, Marion B., and Middleton, Kathleen. *Elementary School Health Instruction*. St. Louis, Mo.: Times Mirror, Mosby College Publishing, 1984.

Ray, Oakley. *Drugs, Society, and Human Behavior*. 2d ed. St. Louis, Mo.: C.V. Mosby Co., 1978.

Seffrin, John R. "Making Smoking Education Relevant to the School-Age Child." *Health Education* (March/April 1981).

Seffrin, John R. "Health Hazzards of Smoking During Pregnancy." *IAHPERD Journal* 9, no. 4 (May 1980).

Seffrin, John R., and Grove, Randall B. "Tobacco Use and Oral Health." *Journal of School Health* 52, no. 1 (January 1982): 59-62.

Shimkin, Michael B. *Science and Cancer*. National Institutes of Health NIC Publication No. 83-568, November 1982.

Silverberg, Edwin, and Lubera, John A. *Cancer Statistics*. New York: American Cancer Society, 1983.

Smoking and Health Reporter 1, no. 1-4 (1984).

Sorochan, Walter D. *Promoting Your Health*. New York: John Wiley and Sons, 1981.

Stare, Frederick J., and Dwyer, Johanna. *Healthy Eating for Teenagers*. Dallas, Texas: American Heart Association, 1980.

Suitor, Carol West, and Hunter, Merrily Forbes. *Nutrition: Principles and Application in Health Promotion*. Philadelphia: J.B. Lippincott, 1980.

Surgeon General's Report on Health Promotion and Disease Prevention. *Living Well: An Introduction to Health Promotion and Disease Prevention*. U.S. Department of Health, Education and Welfare Public Service Publication No. 80-50121, 1980.

Surgeon General's Report on Health Promotion and Disease Prevention. *Healthy People*. U.S. Department of Health, Education and Welfare Publication No. 79-55071, 1979.

Torabi, Mohammad R. "Alcohol Attitude Scale for College Students." Ph.D. dissertation, Purdue University, May 1982.

U.S. Department of Agriculture. *Building a Better Diet*. Program Aid No. 1241,

September 1979.

U.S. Department of Agriculture and Health and Human Services. *Nutrition and Your Health*. Pamphlet.

U.S. Department of Health and Human Services. *Health United States*. Hyattsville, Md., December 1982.

U.S. Department of Health and Human Services. *Health United States*. Hyattsville, Md., December 1981.

U.S. Department of Health and Human Services. *Health Style: A Self Test*. Pamphlet. Publication No. (PHS)81-50155, 1981.

U.S. Department of Health and Human Services. *Health United States*. Hyattsville, Md., December 1980.

Winick, Myron. *Nutrition in Health and Disease*. New York: John Wiley and Sons, 1980.

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Appendix

Curriculum Materials

The following educational packages can be obtained free of charge from the American Cancer Society. Contact the national office or local chapter of:

American Cancer Society
777 Third Avenue
New York, NY 10017
Phone: (212) 371-2900

Early Start to Good Health (K-3)

This teaching unit promotes positive health habits and a general knowledge of how the body functions with children in kindergarten through third grade. Each unit includes a six-minute musical film strip, a wall chart, a teacher's guide, and spiritmasters for student activities.

Health Network (4-6)

Each of the modules contains a filmstrip with accompanying record or cassette, teacher's guide, spiritmaster for student activities, and poster. Grade 4 is on self-concept, Grade 5 on the respiratory system, and Grade 6 on decision making.

Health Myself (7-9)

This multidisciplinary smoking education program consists of three units that can be used either in health education programs or integrated into science, language arts, and social studies classes. Each unit features a filmstrip and a variety of individual and group activities.

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Nature of Cancer Kit (7-9)

This kit contains a teaching guide, spiritmaster, and transparency. Emphasis is on cell structure and abnormal cell division. The relationship between smoking and cancer is shown.

Nature of Cancer Kit (10-12)

This kit includes a teaching guide, transparencies, and spiritmaster. Emphasis is on cancer causes, treatment, and control.

Information concerning the following program packages, as well as materials on consumer health, disease prevention and control, drug use and abuse, and nutrition, can be obtained from the local chapter or national office of:

American Heart Association
7320 Greenville Avenue
Dallas, TX 75231
Phone: (214) 750-5300

Take Care of Your Heart
One Heart for Life

Each of these program packages includes brochures, pamphlets, films and filmstrips, cassettes, games, posters, and slides.

Information concerning the following program package, as well as materials on community health, disease prevention and control, growth and development, and environmental health, can be obtained from the local chapter or national office of:

American Lung Association
1740 Broadway
New York, NY 10019
Phone: (212) 245-8000

Lung Health Module

This program package contains films, literature and periodicals, posters, slides, and cassettes.

Information concerning the following materials, as well as materials on community health, consumer health, family life, growth and development, mental health, and safety and first aid, can be obtained from the local chapter or national office of:

American Red Cross
17th and D Streets, N.W.
Washington, DC 20006
Phone: (202) 737-8300

Educational Series on Blood and Circulatory System

This series contains films and filmstrips, pamphlets, textbooks, and posters.

Information concerning the following program package, as well as materials on consumer health, drugs, alcohol and tobacco, environmental health, growth and development, health careers, nutrition, personal health, safety, and first aid, can be obtained from:

American Dental Association
211 East Chicago Avenue
Chicago, IL 60611
Phone: (312) 440-2500

Learning About Your Oral Health (K-12)

This program package includes films, kits, pamphlets, miniposters, and badges.

Agencies Providing Curriculum Resources

To obtain information on other health education curriculum materials, the following organizations may be contacted.

American School Health Association
P. O. Box 708
Kent, OH 44240

Association for the Advancement of Health Education
1900 Association Drive
Reston, VA 22091
(703) 476-3440

American Public Health Association
1015 15th Street, N.W.
Washington, DC 20005
(202) 789-5600

National Center for Health Education
30 East 29th Street
New York, NY 10016
(800) 232-2330

United Way Health Foundation
618 Second Street, N.W.
Canton, OH 64703
(216) 455-0378

Chicago Heart Association
20 Wacker Drive
Chicago, IL 60606
(312) 346-4675

American Health Foundation
320 E. 43rd Street
New York, NY 10017
(212) 953-1900

Management Sciences for Health
141 Tremont Street
Boston, MA 02111
(617) 482-9450

Feelin' Good
133 Teft Road
Spring Arbor, MI 49283
(517) 750-1500

California State Department of Education
721 Capitol Mall
Sacramento, CA 95814
(716) 322-5420

Centers for Disease Control
1600 Clifton Road, N.E.
Atlanta, GA 30333
(404) 329-3311

National Health Information Clearinghouse
1555 Wilson Blvd.
Rosslyn, VA 22209
(202) 522-2590

National Dairy Council
6300 N. River Road
Rosemont, IL 60018
(312) 696-1020

American Alliance For Health, Physical Education, Recreation, and Dance
1900 Association Drive
Reston, VA 22091
(703) 476-3400

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3. Open Education: Promise and Problems
4. Performance Contracting: Who Profits Most?
7. Busing: A Moral Issue
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13. What Should the Schools Teach?
14. How to Achieve Accountability in the Public Schools
19. Sex Differences in Learning to Read
20. Is Creativity Teachable?
22. The Middle School: Whence? What? Whither?
23. Publish: Don't Perish
26. The Teacher and the Drug Scene
29. Can Intelligence Be Taught?
30. How to Recognize a Good School
31. In Between: The Adolescent's Struggle for Independence
37. General Education: The Search for a Rationale
41. Metrication, American Style
43. Motivation and Learning in School
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47. The School's Responsibility for Sex Education
56. Equity in School Financing: Full State Funding
57. Equity in School Financing: District Power Equalizing
59. The Legal Rights of Students
60. The Word Game: Improving Communications
62. The People and Their Schools: Community Participation
64. The Community as Textbook
65. Students Teach Students
66. The Pros and Cons of Ability Grouping
70. Dramatics in the Classroom: Making Lessons Come Alive
78. Private Schools: From the Puritans to the Present
79. The People and Their Schools
80. Schools of the Past: A Treasury of Photographs
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